Claims

1. In a computer system with selected computer information conforming to a first representation scheme having a first model structure, a representation scheme transformation method for transforming the selected computer information into a second representation scheme having a second model structure, comprising:

expressing the selected computer information in a uni-level description using basic structures that represent the selected computer information with reference to a generic set of abstractions applicable to representation schemes having different model structures; and

transforming the selected computer information expressed in the uni-level description to the second representation scheme.

2. The method of claim 1 in which the basic structures include construct elements and structural connector elements, wherein the structural connector elements connect construct elements.

3. The method of claim 2 in which the basic structures further include a lexical element that describes a model construct with instances that contain primitive-value types.

4. The method of claim 2 in which the basic structures further include a conformance connector that specifies a schema-instance relationship between constructs.

5. The method of claim 1 in which the basic structures of the uni-level description have plural generic elements, including construct elements and structural connector elements, and wherein expressing the selected computer information in the uni-level description includes forming triples to represent the uni-level description.

6. The method of claim 1 further comprising characterizing portions of the selected computer information as model constructs, schema data, or instance data.

7. The method of claim 1 in which the first and second model structures are the same.

8. The method of claim 1 in which the first and second model structures are different.

9. The method of claim 1 in which the first and second representation schemes are each one of an extensible markup language model, a resource definition framework model, a topic map model, and a database model.

10. In a computer system with selected computer information conforming to a first representation scheme that includes first model data, first schema data, and first instance data, a representation scheme transformation method for transforming the selected computer information into a second representation scheme with second model data, second schema data, and second instance data, comprising:

expressing the selected computer information in a uni-level description using basic structures that include construct elements and structural connector elements that connect construct elements, the construct elements and structural connector elements being applicable to representation schemes having different model structures; and

transforming the selected computer information expressed in the uni-level description to the second representation scheme .

11. The method of claim 10 in which the first model data of the first representation scheme are transformed into the second model data of the second representation scheme.

12. The method of claim 11 in which the model data of the first and second representation schemes are different.

13. The method of claim 10 in which the first schema data of the first representation scheme are transformed into the second schema data of the second representation scheme.

14. The method of claim 10 in which the first model data of the first representation scheme are transformed into the second schema data of the second representation scheme.

15. The method of claim 10 in which any of the first model data, first schema data, and first instance data are transformed into any of the second model data, second schema data, and second instance data.

16. The method of claim 10 in which any two or more of the first model data, first schema data, and first instance data are transformed into any of the second model data, second schema data, and second instance data.

17. The method of claim 10 in which the basic structures further include a lexical element that describes a model construct with instances that contain primitive-value types.

18. The method of claim 10 in which the basic structures further include a conformance connector that specifies a schema-instance relationship between constructs.

19. The method of claim 10 in which expressing the selected computer information in the uni-level description includes forming triples that comprise basic structure elements and the selected computer information.

20. The method of claim 10 in which the first and second representation schemes are each one of an extensible markup language model, a resource definition framework model, a topic map model, and a database model.

21. A computer readable medium having stored thereon a uni-level description of a first representation scheme that includes any of first model data, first schema data, and first instance data,, comprising:

basic structures that include construct elements and structural connector elements that connect construct elements, the basic structures expressing any of the first model data, first schema data, and first instance data and being applicable to representation scheme having different model structures,

22. The medium of claim 21 in which the basic structures further include a lexical element that describes a model construct with instances that contain primitive-value types.

23. The medium of claim 21 in which the uni-level description is represented as triples with the basic structure elements and the selected computer information.

24. The medium of claim 21 in which the basic structures express all of the first model data, first schema data, and first instance data.

25. The medium of claim 21 in which the basic structures further include a conformance connector that specifies a schema-instance relationship between constructs.

26. The medium of claim 21 in which the first representation scheme is one of an extensible markup language model, a resource definition framework model, a topic map model, and a database model.

27. In a computer readable medium of a computer system with selected computer information conforming to a first representation scheme having a first model structure, representation scheme transformation software for transforming the selected computer information into a second representation scheme having a second model structure, comprising:

software for expressing the selected computer information in a uni-level description using basic structures that represent the selected computer information with reference to a generic set of abstractions applicable to representation schemes having different model structures; and

software for transforming the selected computer information expressed in the uni-level description to the second representation scheme.

28. The medium of claim 27 in which the basic structures include construct elements and structural connector elements that connect construct elements.

29. The medium of claim 27 in which the basic structures of the uni-level description have plural generic elements, including construct elements and structural connector elements, and wherein the software for

expressing the selected computer information in the uni-level description includes software for forming triples to represent the uni-level description.

30. The medium of claim 27 in which the first and second model structures are the same.

31. The medium of claim 27 in which the first and second model structures are different.

32. In a computer readable medium of a computer system with selected computer information conforming to a first representation scheme that includes first model data, first schema data, and first instance data, representation scheme transformation software for transforming the selected computer information into a second representation scheme that includes second model data, second schema data, and second instance data, comprising:

software for expressing the selected computer information in a uni-level description using basic structures that include construct elements and structural connector elements that connect construct elements, the construct elements and structural connector elements being applicable to representation schemes having different model structures; and

software for transforming the selected computer information expressed in the uni-level description to the second representation scheme.

33. The medium of claim 32 in which any of the first model data, first schema data, and first instance data are transformed into any of the second model data, second schema data, and second instance data.

34. The medium of claim 32 in which any two or more of the first model data, first schema data, and first instance data are transformed into any of the second model data, second schema data, and second instance data.

35. The medium of claim 32 in which the software for expressing the selected computer information in the uni-level description includes software for forming triples that comprise basic structure elements and the selected computer information.

36. A computer readable medium of a computer system, comprising:

selected computer information conforming to a first representation scheme having a first model structure; and

uni-level description software for expressing the selected computer information in a uni-level description using basic structures that represent the selected computer information with reference to a generic set of abstractions applicable to representation schemes having different model structures.

37. The medium of claim 36 in which the basic structures include construct elements and structural connector elements that connect construct elements.

38. The medium of claim 36 in which the basic structures of the uni-level description have plural generic elements, including construct elements and structural connector elements, and wherein expressing the selected computer information in the uni-level description includes forming triples to represent the uni-level description.

39. A computer readable medium of a computer system, comprising:

selected computer information conforming to a first representation scheme that includes first model data, first schema data, and first instance data; and

uni-level description software for expressing the selected computer information in a uni-level description using basic structures that include construct elements and structural connector elements that connect construct elements, the construct elements and structural connector elements being applicable to representation schemes having different model structures.

40. The medium of claim 39 in which expressing the selected computer information in the uni-level description includes forming triples that comprise basic structure elements and the selected computer information.